



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,811	01/16/2001	Richard Leman	2497/101	4275

2101 7590 12/12/2002

BROMBERG & SUNSTEIN LLP  
125 SUMMER STREET  
BOSTON, MA 02110-1618

EXAMINER

JENKINS, JERMAINE L

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 12/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/700,811	LEMAN, RICHARD
	Examiner Jermaine Jenkins	Art Unit 2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_\_.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-19 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-19 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In referring to claim 6, the expression "this information" is unclear. What information is used together with the code? Is it the battery voltage and/or the operating temperature?

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 7, 10-15 & 19 are rejected under 35 U.S.C. 102(b) as being anticipated by McClelland (WO 96/15919).

With respect to claims 1 & 15, McClelland teaches the claimed apparatus comprising a pressure transducer (120) for sensing pressure of a tire and providing a tire pressure signal (Page 6, lines 3-10), a transmitter (170), a signal processor (100) connected to the pressure transducer (120) for providing a signal dependent on the tire pressure signal to the transmitter (170) (Page 7, lines 27-30), and a timing circuit (clock counter) connected to the signal processor (100) which is

Art Unit: 2855

configured to automatically switch the tire pressure sensor (120) on periodically for a predetermined interval to measure the tire pressure and switch off the tire pressure sensor at all other times to conserve battery power (Page 3, lines 7-23) which the timing circuit comprises a timer (clock counter) and four switches (130-160), the timer being configured to periodically actuate the switches and thereby connect the pressure sensor (120) to the battery to turn the tire pressure sensor (120) on for said predetermined interval (Page 7, lines 21-30).

With respect to claim 2, McClelland teaches the claimed apparatus comprising a non-volatile memory device (EEPROM) for storing information from the pressure sensor (120) (Page 7, lines 10-13).

With respect to claim 3, McClelland teaches the claimed apparatus comprising a non-volatile memory device (EEPROM) that stores calibration information that is used to determine the tire pressure (Page 7, lines 13-15).

With respect to claim 4, McClelland inherently teaches the claimed apparatus comprising a temperature transducer connected to the signal processor (100) to provide a temperature signal to the signal processor (100) wherein the signal processor (100) is adapted to apply a temperature compensation to the tire pressure signal in dependence on the temperature signal (Page 7, lines 17-20, Continental Can Co. USA v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991)).

With respect to claim 5, McClelland teaches the claimed apparatus comprising the signal processor (100) as a microcontroller having an embedded computer program for controlling the operation of the pressure sensor (120) (Page 7, lines 10-13 & Page 8, lines 14-17).

With respect to claim 7, McClelland teaches the claimed apparatus comprising the transmitter (170) having a surface acoustic wave (SAW) resonator (Page 8, lines 2-4).

With respect to claims 10 & 14, McClelland teaches the claimed apparatus comprising the cab unit comprising a receiver for detecting transmissions from respective transmitters of the tire pressure sensors; and a display for providing a driver with information about the tire on the vehicles in dependence on the received transmissions from the pressure sensors (Page 4, lines 6-12).

With respect to claims 11 & 13, McClelland teaches the claimed apparatus comprising a signal processor for processing signals from the pressure sensors and generating a coded signal for transmission which identifies the transponder unit and tire pressure location, and a transmitter for transmitting the coded signal to a remote receiver where the information can be displayed to a driver about the tires associated with the transponder unit (Page 8, lines 12-24).

With respect to claim 12, McClelland teaches the claimed apparatus comprising a memory to store a unique identification code to identify the transponder unit (Pages 12, lines 2-4).

With respect to claim 19, McClelland teaches the claimed apparatus comprising a receiver of a signal processing unit that is programmed to recognize transmissions from sensors connected to the wheels of the vehicle and ignore all others (Page 9, lines 13-20).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2855

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over McClelland (WO 96/15919)

Referring to claim 8, McClelland lacks the claimed configuration so that there are not any transmissions until the tire pressure sensor is connected to an inflated tire. Although the connection between the pressure sensor and inflated tire is not located in the above elements in McClelland, it would have been obvious to one of ordinary skill to connect the tire pressure sensor to the inflated tire for the purpose of obtaining a pressure reading from the inflated tire since it is well known in the art that the pressure sensor to the tire must be in connection in order to receive any pressure readings.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over McClelland (WO 96/15919) in view of Smith et al (6,034,596).

Referring to claim 9, McClelland lacks the claimed configuration of the tire pressure sensor adapting to be screwed onto the tire valve stem. Smith et al teaches a pressure sensor (20) fixed into a sensor unit (10) that is screwed onto a tire valve stem (11) (Column 2, lines 41-54). One of ordinary skill in the art would have readily recognized the advantage and desirability to secure the pressure sensor device to the tire valve stem for reading the pressure of the inflated tire.

8. Claims 16 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClelland (WO 96/15919) in view of Robinson III (5,838,229).

Art Unit: 2855

Referring to claim 16, McClelland lacks the claimed remote tire pressure monitoring system. Robinson III teaches a remote tire pressure monitoring system as illustrated in Figure 1 comprising an antenna (210) receiving signals from the valve stem antenna (150) (Column 6, lines 7-12). One of ordinary skill in the art would have readily recognized the advantage and desirability to employ codes that are unique to the transmitters, which are associated with the respectable receiver.

Referring to claim 17, McClelland lacks the transponder unit is responsive to transmit an identification signal to the remote receiver when power is first supplied to the transponder unit. Robinson III discloses a tire pressure monitoring system as illustrated Figure 1-5 comprising a transmitter (100), a signal processor (250) connected to the pressure transducer for providing a signal dependent on the tire pressure signal to said transmitter (100) (Column 6, lines 24-28), a receiver (200) for detecting transmissions from the respective transmitters of the tire pressure sensors (Column 3, lines 26-34). One of ordinary skill in the art would have readily recognized the advantage and desirability to provide a remote monitoring system for the purpose of employing codes that are unique to the transmitters, which are associated with the respectable receiver.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over McClelland (WO 96/15919) in view of Rosenfield (5,513,524).

Referring to claim 18, McClelland lacks claimed invention in which power is supplied to the transponder unit by activation of the vehicle brake light line. Rosenfeld teaches power is applied to a unit (14) when the vehicle brakes are applied (Column 4, lines 34-40). One of ordinary skill in the art would have readily recognized the advantage and desirability to provide a

Art Unit: 2855

connection between an electronic element and vehicle brake line for the purpose of supplying power.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermaine Jenkins whose telephone number is 703-305-3839. The examiner can normally be reached on Monday-Friday 8am-430pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on 703-308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7725 for regular communications and 703-305-3839 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

Jermaine Jenkins

A.U. 2855

JJ

December 11, 2002



HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800